

REMARKS

Claim Rejections -35 U.S.C. § 102

Claims 1-10, 13-19, 21-31, and 33-35 were rejected under 35 U.S.C. § 102(b) as being anticipated by Collier, Jr., U.S. Pat. No. 6,397,790 (Collier). Claims 1-35 have been cancelled and replaced with corresponding claims 36-68, which have been submitted to more succinctly recite what the Applicant considers as his invention. Specifically, newly recited claim 36, which corresponds to previously rejected claim 1, recites that there is another component within the process, a hydrocarbon or hydrocarbon containing fuel component. The hydrocarbon or hydrocarbon containing fuel component is added to the engine together with the gas blend or gas mixture from the hydrogen generator as the fuel for the compression engine undergoing assisted combustion. Additionally, claim 36 recites that exhaust gases, after having been discharged from the engine, are passed through a heat exchanger where heat is extracted to heat materials being admitted to the hydrogen generator for forming the hydrogen containing gas.

Collier does not disclose such a system, wherein there is the presence of another hydrocarbon fuel component and the presence of an exhaust gas heat exchanger, as presently claimed. Collier only discloses a single fuel, with natural gas being the sole component of the fuel. There is no description, suggestion or teaching in Collier that the fuel can comprise another component besides the natural gas, particularly a hydrocarbon containing fuel component added to the natural gas formed by the hydrogen generator, more particularly by the reformer. The claimed step of the gas blend or gas mixture formed by the hydrogen generator is not anticipated by Collier, which only shows natural gas being reformed. Similarly, the addition of the hydrocarbon containing component is another presently claimed feature of the present invention for which Collier does not have a counterpart.

Furthermore, Collier does not disclose the use of an exhaust heat exchanger to heat incoming materials for admission to the hydrogen generator for forming the hydrogen containing gas in the hydrogen generator. Collier is silent as to the feature, since the main thrust of the Collier invention is a reformer for reforming substantially all hydrocarbons in the natural gas, which is the sole fuel supply for the engine. As such, Collier describes a different system than claimed in claim 36, and allowance of claim 36 is requested. Independent claims 37, 38, 53, 63, which correspond to previously presented independent claims 2, 3, 17, and 28, also specify that there is another

component, which is a hydrocarbon or hydrocarbon containing fuel component added to the engine together with the gas blend or gas mixture. Accordingly, claims 36, 37, 38, 53, and 63, along with dependent claims 39-52, 54-62, and 64-68, as well, are believed to be patentably distinct from Collier, and allowance is respectfully requested.

Claims Rejections – 35 U.S.C. § 103

Claims 11 and 12 were rejected under 35 U.S.C. § 103(a) as being obvious over Collier, Jr. As stated above, claims 11 and 12 have been cancelled, and they have been replaced with corresponding claims 46 and 47, which depend from newly submitted claim 36. Collier does not anticipate the system recited in claim 36, having a hydrocarbon or hydrocarbon containing fuel component added to the engine together with the gas blend or gas mixture. Likewise, claim 36 is not obvious in view of Collier, as Collier does not show, teach, or suggest a system having more than a single fuel, i.e. natural gas. That is, Collier describes a system where natural gas is the sole fuel and does not show, teach, or suggest the possibility of any system other than natural gas being the sole fuel. As such, claim 36 is not obvious, nor are claims 46 and 47 which depend from claim 36, and allowance of claims 46 and 47 is respectfully requested.

Claim Rejections – 35 U.S.C. § 112

Claim 20 was rejected under 35 U.S.C. § 112 ¶ 2 as lacking antecedent basis for the term “fuel cell”. Claim 20 has been cancelled. Corresponding claim 56 depends from claim 54, which provides antecedent basis for the term fuel cell. Removal of the rejection is requested.


Claim 32 was rejected under 35 U.S.C. § 112 ¶ 2 for being indefinite. Claim 32 has been cancelled. Corresponding claim 66 includes the phrase “hydrocarbon material”, which is believed to overcome the rejection. Allowance is requested.

Conclusion

Applicant has submitted new claims 36-68 that correspond to original claims 1-35, which more succinctly define what the Applicant believes to patentably distinguish his invention from the prior art, including Collier. No new matter has been added to the application. Allowance is respectfully requested.

Respectfully Submitted,

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